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| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
| EXAMINER | | | | |
| CROW, ROBERT THOMAS | | | | |
| ART UNIT | | PAPER NUMBER | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/501,772

Applicant(s)

BOCKELMANN ET AL.

Examiner

Robert T. Crow

Art Unit

1634

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 07 May 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 5 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

/Robert T. Crow/
Primary Examiner, Art Unit 1634

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's after-final arguments filed 7 May 2010 (hereafter the "Remarks") have been fully considered but they are not persuasive for the reasons discussed below.

A. Applicant argues on pages 3-4 that Lindsay et al allegedly teach a floating gate voltage, thereby making it impossible to fix both the potential or the fluid and the gate voltage so that it will be the same for all the FETs used. Thus, Applicant argues the teachings of Lindsay et al individually.

However, a review of Lindsay et al yields not teaching of a "floating" voltage. In addition, MPEP 716.01(c) makes clear that "[t]he arguments of counsel cannot take the place of evidence in the record" (In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965)). Thus, counsel's mere arguments that Lindsay et al teach a floating gate voltage, thereby making it impossible to fix both the potential or the fluid and the gate voltage so that it will be the same for all the FETs used cannot take the place of evidence in the record.

It is noted that the Response above should not be construed as an invitation to file an after final declaration. See MPEP 715.09 [R-3].

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Further, Lindsay et al is not relied upon for the teaching fixing the potential of the active zones with an electrode that applies a gate source voltage to the FETs. Rather, Hafeman et al is relied upon for this teaching.

B. Applicant argues on page 5 of the Remarks that Kariyone et al does not teach simultaneous use of the electrodes, differential measurements, or transistors.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., simultaneous use of the electrodes) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In addition, as noted in the previous Final Office Action, Kariyone et al is merely relied upon for the teaching of the known technique of measuring initial immobilization of a probe to a surface of a sensor. Lindsay et al teach differential measurements (paragraph 0032), which is only required by instant claim 8, and not by independent claim 1. Lindsay et al also teach the use of FET transistors (e.g., paragraph 0036).

D. Applicant argues on page 6 of the Remarks that the reference electrode of Kariyone et al cannot be readily included in the method of Lindsay et al.

However, it is reiterated that Kariyone et al is merely relied upon for the teaching of the known technique of measuring initial immobilization of a probe to a surface of a sensor, and therefore is not relied upon for a reference electrode. Thus, because Kariyone et al is not relied upon for a reference electrode, Applicant's arguments regarding "substantial reconstruction" of Lindsay et al are moot.

Further, it is reiterated that the arguments of counsel cannot take the place of evidence in the record. Thus, counsel's mere arguments that Kariyone et al cannot be combined with Lindsay et al and that "substantial reconstruction" would be required cannot take the place of evidence in the record.

It is also reiterated that the Response above should not be construed as an invitation to file an after final declaration.

E. In response to Applicant's argument on pages 6-7 of the Remarks that Lindsay et al and Kariyone et al are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both references relate to electrical detection of reactions of biological molecules.

Indeed, Applicant's own arguments on pages 6-7 of the Remarks confirm that the two references are analogous. Applicant cites paragraph 0010 of Lindsay et al, which discussed electrical detection of binding between two biomolecules (i.e., DNA hybridization) via shifts in current. Applicant also argues Kariyone et al teach detection measurement current. Thus, the references are analogous.

F. Applicant argues on page 7 of the Remarks that the combination does not yield predictable results, and that "it is possible" that the combination is no longer operable.

However, Applicant provides no evidence to support this argument. Therefore, it is reiterated that the arguments of counsel cannot take the place of evidence in the record. Thus, counsel's mere arguments that the results are not predictable and the pure speculation that "it is possible" that the combination is no longer operable cannot take the place of evidence in the record.

It is also reiterated that the Response above should not be construed as an invitation to file an after final declaration.

Further, with respect to the predictability of the results, Kariyone et al clearly teach the electrical measurements made to detect the presence of the immobilized probe confirming the stable immobilization of the probe to the surface (column 17, lines 1-10). Thus, the known technique of using the initial detection of the immobilization of a probe taught by Kariyone et al predictably results in verification of stably immobilized probes.

G. Applicant argues on page 7 of the Remarks that Hafeman et al do not teach FETs.

However, as previously noted in the rejections, Hafeman et al is merely relied upon for using a fixed potential in a control electrode that sets the potential of the other electrodes, thereby providing the added advantage of allowing measurement of analyte binding (column 19, line 45-column 20, line 15) with maximal sensitivity (Abstract). Thus, Hafeman et al teach the known technique of fixing the potential of the active zones with a common electrode, which is analogous to the control FET electrode of Lindsay et al (i.e., not used for hybridization; paragraph 0040).

Therefore, as noted in the rejections, the application of the fixed potential in accordance with the teachings of Hafeman et al would result in the application of a gate source voltage to the field effect transistors of Lindsay et al in view of Kariyone et al, thus arriving at the instantly claimed method with a reasonable expectation of success.

H. Applicant argues on pages 8-9 of the Remarks that the ordinary artisan would not use the electrodes of Hafeman et al in the method of Lindsay et al.

However, the rejection does not rely on this combination. As noted above, Hafeman et al is relied upon for the application of the fixed potential, which would result in the application of a gate source voltage to the field effect transistors of Lindsay et al in view of Kariyone et al, thus arriving at the instantly claimed method with a reasonable expectation of success.

I. With respect to the comments of Hafeman et al that FET devices have not found commercial acceptance, it is noted that the patent of Hafeman et al was issued in 1992, whereas Lindsay et al, which does use FETs, was published in 2004, and clearly indicates the acceptance and desirability of FETs in nucleic acid assays. Thus, it would be obvious to the ordinarily skilled artisan that the later reference of Lindsay et al overrides the twelve year old comments of Hafeman et al.

Further, the main criticism of Hafeman et al concerns exposed gate regions (see page 8 of the Remarks). The FETs of Lindsay et al specifically allow the interaction of fluids in an experimental environment (paragraph 0019 of Lindsay et al), thus negating the criticism offered by Hafeman et al.

/Robert T. Crow/
Primary Examiner, Art Unit 1634